# The Main Menu

Newsletter for AppleWorks Users

Volume 2 Number 7 July 1987

## Tracking Your Stocks with AppleWorks

*by John B. Slack*

"Wow, look at this! That stock I bought last week has gone up ten points—but that dog I fell for six months ago is still going down. Everything else seems to be holding steady. Am I losing or winning?"

Given the volatility of today's stock market, the question's appropriate. With the AppleWorks spreadsheet template presented here, you can keep track of your investments easily; you can enter current stock prices and update your portfolio whenever you like. When you complete your transactions, AppleWorks adjusts your portfolio automatically.

The template also lets you record dividend payments, a useful feature at tax time. It's even flexible enough to handle stock splits and dividend reinvestments. The number of stocks and transactions is limited only by the amount of desktop memory available.

### ►Getting Started

Create a new spreadsheet file from scratch and call it Portfolio. A blank spreadsheet with rows and columns appears.

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## Heard Here First

*by Deborah de Peyster*

**AppleWorks Forever?** We're hoping Apple Computer plans to make AppleWorks the cornerstone of its new software company. While the firm has made no decision yet—it hasn't even chosen a name for the new company—we think AppleWorks would be a steady income producer, and, with a little investment, could grow in sales. For you, it could mean better user support—perhaps even a hot line—and regular updates. We'll let you know what Apple decides, and whether it has to change AppleWorks' name if it moves the program to the new company. So far, Apple has been silent on all those issues.

**IIc tidbits:** Apple has been working fast and furiously on a new IIc that includes more memory and a built-in 3½-inch disk drive. We understand the project's code name was "Bert." (Is there an Ernie in the works, too?)

The new product was expected this fall, but we heard recently that Apple has canceled the whole thing. Apple

has confirmed none of these observations. We do know, however, that Apple has no plans to introduce any new II-series machines this year.

So what happened? We think the machine exists, but that Apple is stalling as it figures out how to position it in the consumer market against inexpensive MS-DOS clones. It still considers the IIc its "consumer machine," but the nature of computer consumers is changing (you can buy an IBM clone for $499), and Apple needs to reconsider its approach in this marketplace. We expect to see some interesting pricing this fall for both the IIc and IIe.

**Don't hold your breath:** If you're one of those users interested in Broderbund Software stock, you'll have to wait a little longer. After going on its "road show"—a tour of major financial groups to tell them its story—the company decided to postpone the offering. Apparently Broderbund and the financial people weren't as pleased with the company's sales figures as they expected. It looks like the plan is off now until at least next year. ■

# Answers

*by Kelly Stirn*

*If you'd like Kelly to answer your AppleWorks questions, write him at* The Main Menu, *Elm Street, Peterborough, NH 03458. We'll print the answers to as many questions as we can.*

## ? Motherboard Questions

**Q** I replaced my Apple IIe Rev A motherboard with a Rev B motherboard. Prior to this, AppleWorks 1.3 ran smoothly. With the new motherboard, addressing a number or inserting a number in a blank cell causes an interrupt and puts me into the monitor. Is AppleWorks 1.3 incompatible with the new motherboard?

*Leroy F. Raimer*
*Pittsburgh, PA*

**A** *AppleWorks 1.3 is completely compatible with Rev B motherboards. As unlikely as it seems, the problem is probably a defective chip on your motherboard. If you run the same version of AppleWorks on another Rev B motherboard, I'm sure it will operate correctly. Show it to your dealer and ask him to check the chips and replace your motherboard if necessary.*

## ? Enhancement Bootup

**Q** I use AppleWorks 2.0 on an Apple IIc, with an Applied Engineering 1-megabyte Z-RAM Ultra III card. I've also modified AppleWorks with Applied Engineering's Desktop Expander and Pinpoint Publishing's Pinpoint, Spelling Checker, and Key-Player programs. All programs are copied to RAM during AppleWorks' bootup.

I'd like to turn on my computer and have AppleWorks ready with all enhancements installed. Since they extend bootup time significantly, I find I have to wait to press Return when AppleWorks asks for the date. Can I modify the code to skip the Return?

*Thomas K. Tamlyn*
*Bettendorf, IA*

**A** *In the January 1987 issue of* The Main Menu *("Favorites," p. 12), we described a program written by Alan Bird, author of AutoWorks, that patches AppleWorks to perform this task. I'll repeat it here, since many readers have asked for it.*

*1) For version 1.3 or 2.0, type BLOAD APLWORKS.SYSTEM, TSYS,A$2000 from ProDOS BASIC.*

*2) For version 1.3, type the following:*
*POKE 13193,44*
*POKE 13855,208*
*POKE 13856,19*


## The Main Menu ►►►►►►►►►►►►►►►►►►►►

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Kelly Stirn is the AppleWorks engineering product manager for Apple Computer Inc. Steve High was a member of the AppleWorks development team and now owns Steve High Public Relations. One of his clients is Applied Engineering Inc.

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*3) For version 2.0, type the following:*
*POKE 14468,44*
*POKE 14148,208*
*POKE 14149,19*

*4) Finish, for either version, with BSAVE APLWORKS .SYSTEM,TSYS,A$2000.*

### ? Mail-Merge Problem

**Q** I run a small business with AppleWorks 2.0. I like my customer database in alphabetical order. With company names preceded by initials, however, this seems almost impossible. Right now, I'm entering such companies into my database last name first with a comma, followed by the initials. This appears on screen correctly, but looks horrible in mail merge. I can't believe Apple missed such a common business item.

*Donald R. Adams*
*South Hadley, MA*

**A** *AppleWorks 2.0's mail merge includes a feature to handle just this type of problem. When AppleWorks prints a word-processor document containing two mail-merge categories separated by a space, with the first category blank, the second category begins printing flush left (where the first category started) rather than one space after the first category.*

*This feature takes care of instances in which, for example, you may or may not have a salutation before someone's name, but still want the name to line up with the address below.*

*To solve your particular problem, you'll have to create another category for the initials. When you place mail-merge categories into the word-processor document, they'll look something like this:*

<Initials> <Company Name>
<Address> <City>, <State> <Zip>

*Two company names, one with initials, the other without, will each begin at the proper position. A company without initials prints as if you'd entered the mail-merge categories as the following:*

<Company Name>
<Address> <City>, <State> <Zip>

### ? Macros and Subdirectories

**Q** Everybody hates typing pathnames to access AppleWorks subdirectories. Is there a technical reason why you can't open a subdirectory simply by highlighting it and pressing return?

*Preston Boomer*
*Santa Cruz, CA*

**A** *Listing all the possible combinations users would want would increase the potential size of the code. Since this feature would be resident in memory at all times, it would take up valuable desktop space, too, so Apple voted against it.*

*Beagle Brothers, however, offers a product called Super MacroWorks (see Reviews, "Super Macros," March 1987, p. 10), which uses macros to help you set pathnames without having to remember subdirectory names. It's one of the most powerful AppleWorks enhancement packages. Check out JEM Software's Pathfinder (Reviews, "Through a Maze of Subdirectories," April 1987, p. 11, and "Threading Your Way Through Subdirectories," this month's Use It!), too. It lets you choose your pathnames from menus.* ■

## Threading Your Way Through Subdirectories

*by Peter Bjornsen*

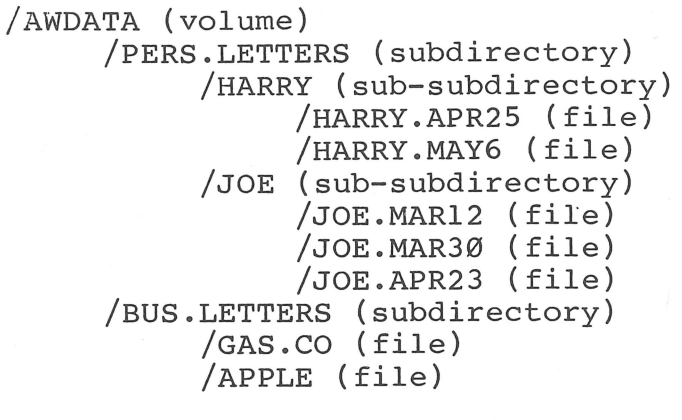
If you've been saving files to your UniDisk 3.5 by merely using OA-S, you've probably found you can't save more than 51 files without creating subdirectories to break them up into manageable sections. Without subdirectories, the data-storage capacity of your UniDisk 3.5 or hard-disk drive is wasted. Instead of putting all your files into one big "box," subdirectories organize your disk into compartments—smaller boxes in which you store related files.

### ►Creating a Subdirectory

From the Other Activities menu, choose the option to Create a Subdirectory. (If you have other disk drives attached to your Apple, be sure the *current drive* is the one on which you want your subdirectory.) AppleWorks asks you to type the complete ProDOS pathname, which consists of the volume (disk) name and the name of your subdirectory.

For example, if your disk is called /AWDATA and you keep all your letters on it, you could sort the letters by category—business and personal, say—to form two subdirectories: /BUS.LETTERS and /PERS.LETTERS. Your pathname for personal correspondence, therefore, would be /AWDATA/PERS.LETTERS. After typing your pathname, press Return. If all goes well, AppleWorks displays the word "Success."

***Figure.*** *Diagram showing relationships of subdirectories and files on disk /AWDATA.*




To put files into your newly created subdirectory, go to the Other Activities menu and choose the first option, Change Current Disk Drive or ProDOS Prefix. Next choose the ProDOS Directory option, type your ProDOS prefix (/AWDATA/PERS.LETTERS), and press Return. You can now save desktop files to disk under the personal-letters subdirectory. (AppleWorks displays your pathname on the top line of the main-menu screen.)

To transfer an existing file to a subdirectory, load it to the desktop and follow the steps outlined above to create a subdirectory. Then, from Other Activities, choose to Change the Current Disk Drive. Choose the ProDOS prefix option and type your ProDOS pathname (/volume /subdirectory). Now return to your file on the desktop (via the main menu) and press OA-S to save your file to the new subdirectory.

Now that your file is in the subdirectory, you'll want to delete it from its original location on your disk. From the Other Activities menu, change the pathname to your slot number and disk drive. (Remember, AppleWorks indicates the current drive or pathname on the top line of the main-menu screen.) Now delete the original file by choosing Delete Files from Disk from the Other Activities menu.

### ►Working with Subdirectory Files

To access subdirectory files, choose Add Files to the Desktop from the main menu, then choose the option to get files from a different disk. Now choose the ProDOS Directory option and type your complete ProDOS pathname. In the example above, you type /AWDATA/PERS.LETTERS to bring up the subdirectory menu listing all your personal letters. (If you forget a subdirectory name, you can check it—and see a list of all subdirectories on your disk—by selecting List All Files from the Other Activities menu.) Press the return key, which brings you back to the Add Files menu.

AppleWorks now lists the pathname you just typed as your current disk, instead of "Disk 1, Slot 4." Press Return again to list all files in the subdirectory. Use the arrow keys to select among files, and Return to load a file to the desktop.

To delete a subdirectory, you must first delete all files in the subdirectory. With the pathname of the subdirectory you want to delete listed as the current disk, choose Delete Files from Disk from the Other Activities menu, and delete the files. Now you can delete the subdirectory: First change the pathname to the drive and slot in which your disk is installed, then delete the subdirectory the same way you deleted the files.

### ►Adding Subdirectories

If you later find that your personal-letters subdirectory is getting too big, you can break it down further, adding sub-subdirectories to separate your letters to Harry from those to Joe. Follow the steps above to create a subdirectory, adding /HARRY to /AWDATA/PERS.LETTERS. Your disk might look something like the "tree structure" in the accompanying **Figure**. To bring up the subdirectory containing your letters to Harry, your pathname is /AWDATA/PERS.LETTERS /HARRY.

### ►Pathfinder

Now, if you have JEM Software's Pathfinder program (P.O. Box 20920, El Cajon, CA 92021, $20; reviewed in April 1987, p. 11), you don't have to type pathnames. You just choose them from Pathfinder's menu selections.

You install Pathfinder on your AppleWorks Program disk. It then becomes an item on the Other Activities menu—it replaces the option to format a disk. Pathfinder won't help you create subdirectories, though; it just lets you add subdirectory names to your volume name or drop them, as well as rename, lock, and unlock files.

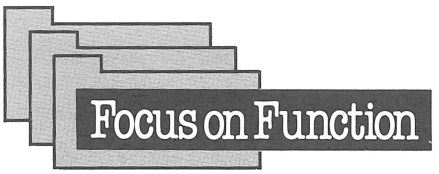
To use Pathfinder, choose option 5 (Other Activities) from the main menu (make sure the current disk is the one

you want) and option 5 (Pathfinder) from the Other Activities menu. The Pathfinder menu shows the disk's volume name and lets you choose to add or drop a subdirectory.

Choose to add a subdirectory, and Pathfinder presents a list of subdirectory names. Scroll through the list with the up- and down-arrow keys and make your choice with the return key. AppleWorks returns you to the Pathfinder menu. Press Escape twice to return to the main menu, then hit Return twice to add files to the desktop. AppleWorks now lists all the files in the chosen subdirectory, and you can load individual files to the desktop.

Whenever you need to get files from another subdirectory or change the pathname, simply go through Pathfinder from the Other Activities menu. Choose Drop a Subdirectory, then Add a Subdirectory from Pathfinder's menu selections. AppleWorks again presents a menu listing the subdirectories on your disk.

If you have files in a sub-subdirectory, simply choose Add a Subdirectory a second time—once to add a subdirectory to the volume name (/AWDATA/PERS.LETTERS), and again to add the sub-subdirectory (/AWDATA /PERS.LETTERS/HARRY). Then return to the main menu and add files to the desktop in the usual manner. ■




## Spreadsheet Math (Why Your Apple Drives You Crazy)

*by John B. Slack*

Almost everyone who uses a spreadsheet for any length of time will eventually experience a very frustrating dilemma: The answer to a carefully prepared formula just doesn't seem correct. If you're lucky, the answer is so wild you know right away it's wrong. Often, though, the error is subtle, and the wrong answer passes undetected. Large spreadsheets with many interrelated cells may become irreparably damaged owing to just one initial bad cell.

Computers are fussy and have no common sense at all. They take your input, crunch the numbers exactly as you tell them, then spit out the result in the blink of an eye on an official-looking piece of paper. Computers can't evaluate the reasonableness of an answer, read your mind, or do any of the other wonderful things we humans can do.

Even when you discover a mistake, you may still have no idea what went wrong. Everything looks fine. The formula is correct—or is it? The fact is your Apple may not be interpreting the formula the same way you are.

If you think figuring out formulas is easy, tell me the answer to this one:

3+6/3*4

Seems easy enough, doesn't it, but did you get 0.75, 3.5, 11, 12, or 20 for an answer? Or something else? (See **Figure 1**.)

***Figure 1.*** *A pretty simple formula, but it may have any one of five answers, according to your Apple.*

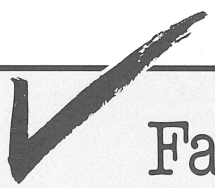
```
3 + 6 / 3 * 4

(3 + 6)/(3 * 4)        =     Ø.75
3 + (6/(3 * 4))        =     3.5
3 + ((6/3) * 4)        =     11
((3 + 6)/3) * 4        =     12
(3 + (6/3)) * 4        =     2Ø
```

Try this one:

3+6/3*4*5+1

Not much different from the first formula, is it? But did you get 0.147, 1.15, 3.098, 4.1, 4.5, 4.75, 18.5, 21, 44, 61, 63, 72, 101, 105, or 120



## Favorites

### ►Something to Avoid

Don't try using AppleWorks 1.3 to view a mail-merge document created with AppleWorks 2.0. If you move the cursor across the mail-merge market, the program will crash. ■

**—William Beasley, North Olmstead, OH**

***Figure 2.*** *Adding two terms triples the number of possible answers.*

```
                3 + 6 / 3 * 4 * 5 + 1

(3 + 6)/((3 * 4 * 5) + 1)          =      Ø.147
((3 + 6)/(3 * 4 * 5)) + 1          =      1.15
3 + (6/((3 * 4 * 5) + 1))          =      3.Ø98
3 + (6/(3 * 4 * 5)) + 1            =      4.1
((3 + 6)/(3 * 4)) * (5 + 1)        =      4.5
(((3 + 6)/(3 * 4)) * 5) + 1        =      4.75
((3 + (6 / (3 * 4)) * 5) + 1       =      18.5
((3 + (6 / (3 * 4))) * (5 + 1))    =      21
3 + ((6 / 3) * 4 * 5) + 1          =      44
(((3 + 6) / 3) * 4 * 5) + 1        =      61
((3 + 6) / 3) * ((4 * 5) + 1)      =      63
((3 + 6) / 3) * 4 * (5 + 1)        =      72
((3 + (6/3)) * 4 * 5) + 1          =      1Ø1
((3 + (6/3)) * ((4 * 5) + 1))      =      1Ø5
((3 + (6/3)) * 4 * (5 + 1))        =      12Ø
```

for an answer? Or something else? See **Figure 2**.

### ►Truth or Consequences

You can obtain any one of these answers from any fine, upstanding, truthful computer. Although we all learned in high-school algebra to multiply and divide terms before adding and subtracting unless indicated otherwise, your Apple doesn't see it that way. The answer it comes up with depends on the way you entered the formula into your spreadsheet and which spreadsheet program you're using.

The key to success in complex spreadsheet formulas is the proper use of brackets, [ ], or parentheses, ( ). Grouping the terms within parentheses clarifies the formula and directs your Apple's sequence of calculations. Your machine always performs the functions within a set of parentheses first; it starts with the innermost set and works outward.

Your AppleWorks manual contains the calculation hierarchy the computer will follow unless you direct it otherwise. Since this sequence isn't the same in other spreadsheet programs, or even in all pocket calculators, don't bother to memorize the list. Just use parentheses wherever you think you might run into a problem.

A word to the wise: If you're not careful to use as many open as closed parentheses, your Apple won't accept your formula. Always make a quick count to be sure your parentheses balance.

Your Apple will allow a number of open parentheses in sequence before it encounters the first closed one—but don't slip in a closed parenthesis to the left of its open partner: (xx))((x) won't work.

Your computer limits the length of the formula it will accept in a cell. You can stretch it slightly by using Open apple-U to add extra terms. If that doesn't work, it's time to extract a group of terms enclosed in parentheses and calculate it in a separate cell. You can often simplify a complex formula by extracting a repeated, identical group of terms.

If you really want to go wild, try solving the following formula without using parentheses:

3+6^1+3*4

When a formula includes an exponent, the range of possible answers is enormous—in this case, 21 to 2,541,865,828,329. The answer I wanted was 5196, or was it 5187? (See **Figure 3**.) Computers drive me crazy!■

***Figure 3.*** *Exponents widen the range of potential answers enormously.*

```
                3 + 6 ^ 1 + 3 * 4

 3 + (6 ^ 1) + (3 * 4)        =      21
(3 + 6) ^ (1 + (3 * 4))       =      2,541,865,828,329
 3 + ((6 ^ (1 + 3)) * 4)      =      5,187
 (3 + (6 ^ (1 + 3))) * 4      =      5,196
```

# Tracking Your Stocks

*Continued from p.1*

Position the cursor on the cells indicated in **Table 1** and type the corresponding labels.

The formulas you'll type into this template are simple, but it's important you place them in the correct cells. Position the cursor on the cells listed in **Table 2** and enter the appropriate formulas.

Remember to type a plus sign where indicated—it tells AppleWorks that a value follows. Otherwise it will read the entry as a label. Your spreadsheet should look like **Figure 1**.

***Table 1.*** *Entering labels.*

| Cell | Label |
|---|---|
| D2 | STOCK PORTFOLIO |
| A4 | DATE TODAY _____ |
| A9 | STOCK |
| G9 | TOTALS |
| A11 | CURRENT PRICE |
| A12 | CURRENT HOLDINGS |
| A13 | CURRENT VALUE |
| A14 | ORIGINAL COST |
| A15 | PROFIT OR LOSS (-) |
| A16 | CURRENT VALUE-TO- |
| A17 | COST RATIO |
| A22 | STOCK |
| A25 | DATE BOUGHT (LABEL) |
| A26 | NUMBER OF SHARES |
| A27 | PRICE |
| A28 | COST |
| A29 | COMMISSION |
| A31 | TOTAL COST |
| A33 | DATE SOLD (LABEL) |
| A34 | NUMBER OF SHARES |
| A35 | PRICE |
| A36 | REVENUE |
| A37 | COMMISSION |
| A39 | NET REVENUE |
| A41 | PROFIT/LOSS (-) |
| A43 | CURRENT HOLDINGS |
| A48 | DATE PAID (LABEL) |
| A49 | AMOUNT |
| A50 | DATE PAID (LABEL) |
| A51 | AMOUNT |
| A52 | DATE PAID (LABEL) |
| A53 | AMOUNT |
| A54 | DATE PAID (LABEL) |
| A55 | AMOUNT |
| A57 | TOTAL DIVIDENDS |

***Table 2.*** *Entering formulas.*

| Cell | Formula |
|---|---|
| C12 | +C43 |
| C12 | +C43 |
| C13 | +C11*C12 |
| C14 | @IF(C26=0,0,C31*(1- (C34/C26))) |
| C15 | @C13-C14 |
| C17 | @IF(C14=0,@NA,C13/C14) |
| C28 | +C26*C27 |
| C31 | @SUM(C28...(C29) |
| C36 | +C34*C35 |
| C39 | +C36-C37 |
| C41 | @IF(C34=0,@NA,C39-(C31*C34/C26)) |
| C43 | +C26-C34 |
| C58 | @SUM(C47...C57 |
| G12 | @SUM(C12...F12) |
| G17 | @IF(G14=0,0,G13/G14) |

Now copy the formulas to the other columns: Place the cursor on cell C12 and press Open apple-C (OA-C, copy), then Return to copy within the spreadsheet. To indicate the source material—the cells you want to copy—type a period, then press the down-arrow key to cell C58. (Here's a hint: Use OA-9.) Press Return.

The cursor jumps back to cell C12, and AppleWorks asks the destination. Put the cursor on cell D12; anchor the range with a period. Press the right-arrow key to cell F12 and hit Return.

***Figure 1.*** *Template with labels entered.*

```
                                STOCK PORTFOLIO

DATE TODAY_________


STOCK                                                      TOTALS

CURRENT PRICE
CURRENT HOLDINGS                0.00                       0.00
CURRENT VALUE                   0.00
ORIGINAL COST                   0.00
PROFIT OR LOSS (-)              0.00
CURRENT VALUE TO
     COST RATIO                   NA                       0.00


STOCK


DATE BOUGHT (LABEL)
NUMBER OF SHARES
PRICE
COST                            0.00
COMMISSION

TOTAL COST                      0.00

DATE SOLD (LABEL)
NUMBER OF SHARES
PRICE
REVENUE                         0.00
COMMISSION

NET REVENUE                     0.00

PROFIT/LOSS (-)                   NA

CURRENT HOLDINGS                0.00



DATE PAID (LABEL)
AMOUNT
DATE PAID (LABEL)
AMOUNT
DATE PAID (LABEL)
AMOUNT
DATE PAID (LABEL)
AMOUNT


TOTAL DIVIDENDS                 0.00
```

The prompt goes through every term in each formula and asks NO CHANGE or RELATIVE. Answer RELATIVE for each term. When you're finished, AppleWorks copies the indicated information. Now place the cursor on cell G12 and copy the formula down the column to cells G13–G15.

To complete the spreadsheet, go to cell D7 and type CURRENT QUOTATIONS. In cell D20 type TRADING HISTORY; in cell D46 type DIVIDEND RECORD. Add horizontal lines by typing "----- in cells C10–G10, C23–F23,

***Figure 2.*** *Entering your portfolio data and calculating profits.*

STOCK PORTFOLIO

DATE TODAY_____

CURRENT QUOTATIONS

| STOCK | Ajax Inc | US Booze | Bug Whip | Dry Hole | TOTALS |
|---|---|---|---|---|---|
| CURRENT PRICE | 51.75 | 13.42 | 76.37 | 10.50 | |
| CURRENT HOLDINGS | 20.00 | 200.00 | 75.00 | 100.00 | 395.00 |
| CURRENT VALUE | 1035.00 | 2684.00 | 5727.75 | 1050.00 | 10496.75 |
| ORIGINAL COST | 913.50 | 1417.50 | 6122.81 | 131.25 | 8585.06 |
| PROFIT OR LOSS (-) | 121.50 | 1266.50 | -395.06 | 918.75 | 1911.69 |
| CURRENT VALUE TO COST RATIO | 1.13 | 1.89 | .94 | 8.00 | 1.22 |

TRADING HISTORY

| STOCK | Ajax Inc | US Booze | Bug Whip | Dry Hole |
|---|---|---|---|---|
| DATE BOUGHT (LABEL) | 12/31/85 | 9/8/83 | 5/21/86 | 10/1/86 |
| NUMBER OF SHARES | 20.00 | 300.00 | 75.00 | 100.00 |
| PRICE | 43.50 | 6.75 | 77.75 | 1.25 |
| COST | 870.00 | 2025.00 | 5831.25 | 125.00 |
| COMMISSION | 43.50 | 101.25 | 291.56 | 6.25 |
| TOTAL COST | 913.50 | 2126.25 | 6122.81 | 131.25 |
| DATE SOLD (LABEL) | | 2/13/86 | | |
| NUMBER OF SHARES | | 100.00 | | |
| PRICE | | 9.75 | | |
| REVENUE | 0.00 | 975.00 | 0.00 | 0.00 |
| COMMISSION | | 48.75 | | |
| NET REVENUE | 0.00 | 926.25 | 0.00 | 0.00 |
| PROFIT/LOSS (-) | 0.00 | 217.50 | 0.00 | 0.00 |
| CURRENT HOLDINGS | 20.00 | 200.00 | 75.00 | 100.00 |

DIVIDEND RECORD

| | | | | |
|---|---|---|---|---|
| DATE PAID (LABEL) | | | | |
| AMOUNT | | | | |
| DATE PAID (LABEL) | | | | |
| AMOUNT | | | | |
| DATE PAID (LABEL) | | | | |
| AMOUNT | | | | |
| DATE PAID (LABEL) | | | | |
| AMOUNT | | | | |
| TOTAL DIVIDENDS | 0.00 | 0.00 | 0.00 | 0.00 |

C30–F30, C38–F38, and D47–E47.

The values you enter into the template will be integers with two decimal places. To format the spreadsheet globally press OA-V, V, F, 2, and Return.

## ►Entering Portfolio Data

After rummaging through your desk, kitchen cupboard, tool box, and the trunk of your car, you finally find the records of your stock investments of the past few years.

Your portfolio consists of shares of Ajax Inc. (they make manhole covers for New York City), U.S. Booze (might as well get some of your money back), Buggy Whip (your barber said they were coming back) and Dry Hole (an oil-industry sleeper recommended by a hitchhiker you met). You go to the section of your spreadsheet containing your trading history, cells C22–F37, and enter the record of your purchases and sales.

To determine the value of your extensive holdings, you grab the business section of your newspaper and find out the current price of your investments. Enter these data into cells C11–F11. AppleWorks tells you you're ahead of the game—in fact, you've made 22 percent on your original investment! Your spreadsheet should look like **Figure 2**.

The template presented here also contains an area where you can record dividends. If you reinvest them, amend the formulas in line 43 to include the totals in line 58—that is, +C26 – C34 + C58, and so on.

You can expand this template to accommodate any number of stocks: Place your cursor on any cell in column F and press OA-I (insert), then C; type in the number of columns you want to add; then press Return. *Don't* place your cursor on column G to make the insertion. If you do, the totals in column G won't recognize the values in the new columns. After creating the space on your spreadsheet, copy the formulas into the new space as described above.

One more thing: This spreadsheet contains a minor circular recalculation. Data in the lower half of the spreadsheet are used in the upper half. To get accurate results each time, you may have to make a double recalculation. Pressing OA-K solves the problem if you're are on automatic recalculation. Press OA-KK if you're in manual-recalculation mode.

You're all set—turn Wall Street on its ear and go for those profits!■

Link Up

## LOOKUP Your Page Length

*by Steve High*

When printing continuous-form labels, Rolodex-type cards, envelopes, checks, and other such forms, you first have to calculate the number of lines per printed page—precisely. Sometimes the first few documents print perfectly, but all the rest are off.

This sporadic printing problem occurs because AppleWorks thinks it has reached the end of a page and sends enough line feeds to go to what it figures is the top of the next page. Calculating page length properly avoids splitting a record between two pages.

Oddly enough, paper length can be a major consideration even when you're not printing on paper. When creating a database from an ASCII file, an improper page length will cause data to fall into the wrong categories after AppleWorks prints the first "page" to disk.

As mentioned in "Quick-and-Dirty Category Rename" (June 1987, p. 4), a simple rule of thumb for databases with 1–25 categories is that page lengths of 1–25 inches, respectively, will work. But other page lengths will also work, and the spreadsheet is best place to figure that out.

### ►Calculating in the Spreadsheet

Since AppleWorks allows page lengths from 1–25, with all decimal intervals in between, calculating every possible page length for 1–30 categories creates an unworkably large spreadsheet.

This solution lets you calculate all logically possible paper lengths you can divide evenly by a number of categories from 1–30. Each time you type in a different number of categories, it recalculates.

The first step is to create a column of figures that counts by the first number in the column (that is, if the first number is 5, the column increases by fives: 5, 10, 15, 20, and so on).

For the sake of our example, let the first number be 5. Enter 5 in cell A4. Enter the formula A4 + A4 in cell A5. Next copy the entry in cell A5 to cells A6–A78 with OA-C. The first reference to A5 should be "relative," but the second reference to A4 should be "no change."

If you change the number in A4, it will count by that number. Change it to 2 and look at the entry in A78. It's 150, the maximum number of lines per page possible with a paper length of 25 inches. That's why the spreadsheet goes to row 78. Numbers higher than two will, of course, exceed the maximum of 150 lines, but that won't affect your calculations.

In B4 enter the formula A4/6. Copy it to cells B5–B78. Column B represents all the paper-length settings you can use with the number of categories represented in cell A4. Change the number in A4 and you'll get a different range of paper lengths. (See **Figure 1**.)

Now, to make this table a little handier, change A4 to G9. Since there's nothing in G9, this move changes both columns to zeros temporarily. You can label G9 by entering "Type # of categories here-->" in cells C9–F9.

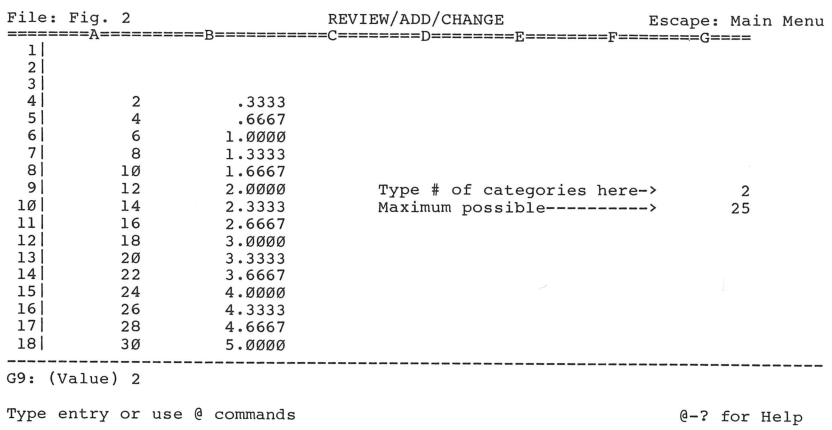
In G10, type @INT(150/A4)*B4. Label that formula "Maximum possible-->." Now

***Figure 1.*** *Range of paper lengths shown in column B.*

```
File: Fig. 1                    REVIEW/ADD/CHANGE              Escape: Main Menu
========A==========B==========C========D========E========F========G====
  1|
  2|
  3|
  4|         5          .8333
  5|        10         1.6667
  6|        15         2.5000
  7|        20         3.3333
  8|        25         4.1667
  9|        30         5.0000
 10|        35         5.8333
 11|        40         6.6667
 12|        45         7.5000
 13|        50         8.3333
 14|        55         9.1667
 15|        60        10.0000
 16|        65        10.8333
 17|        70        11.6667
 18|        75        12.5000
--------------------------------------------------------------------------------
A4: (Value) 5

Type entry or use @ commands                                    @-? for Help
```

***Figure 2.*** *Maximum paper length calculated from number of categories.*



```
File: Fig. 2                    REVIEW/ADD/CHANGE              Escape: Main Menu
========A==========B==========C========D========E========F========G====
  1|
  2|
  3|
  4|         2          .3333
  5|         4          .6667
  6|         6         1.0000
  7|         8         1.3333
  8|        10         1.6667
  9|        12         2.0000          Type # of categories here->         2
 10|        14         2.3333          Maximum possible---------->        25
 11|        16         2.6667
 12|        18         3.0000
 13|        20         3.3333
 14|        22         3.6667
 15|        24         4.0000
 16|        26         4.3333
 17|        28         4.6667
 18|        30         5.0000
-------------------------------------------------------------------------------
G9: (Value) 2

Type entry or use @ commands                                    @-? for Help
```

type a value from 1–30 into G9. (Type 2: See **Figure 2.**) The columns fill with numbers and produce a maximum paper length, in inches, that's divisible by the number of categories you specified.

The formula works by dividing 150—the maximum number of lines possible on a 25-inch page—by the specified number of categories. AppleWorks multiplies the number of inches per record calculated in column B by the quotient of 150/A4. The @INT command throws out any remainder of this division, to yield only round numbers in the answer.

## ►Solving a Quirk

It works—but these answers are wrong by .1 inch about 25 percent of the time, at least as far as the AppleWorks database is concerned.

To see what I mean, change the value in A4 to 13. The largest possible paper length is 23.8 inches. If you look up 23.8 inches, you'll see that your table tells you it requires 143 lines, since 143 is evenly divisible by 13.

But if you move to the printer-options menu in the label-style report-format section of the database, you can set the paper length (PL) to 23.8; AppleWorks says that only 142 lines are contained in a 23.8-inch page. To get the right result, you have to change PL to 23.9.

These gaps are the result of different rounding techniques. You can correct them with a very limited amount of trial and error—one practical way of dealing with the problem.

## ►Data Lookup

Or you can use a data-lookup table. A lookup table forces AppleWorks to report a number that's more or less arbitrary, rather than one you can calculate.

Change the formula in G10 to @LOOKUP(150/B10)*B16), A4..A78). This doesn't change the answer, but it derives it differently. Under this new formula, AppleWorks looks for the largest round number that's a multiple of 13 but less than 150. When it finds it (143), it returns the number in the next column (23.8). You can change that number to 23.9, and AppleWorks will return that number.

The trouble is AppleWorks continues to return 23.9 inches even when you change the number in A4 from 13 to 6. That's the essence of the @LOOKUP command. You can use it to figure a standard 40 percent discount on a column of numbers, but why bother? It would be more straightforward to multiply all numbers in column A by .40. But if the number in column B is an atomic weight, a Social Security number, or some other number you can't derive easily from calculation, @LOOKUP can be very helpful.

As it happens, you can calculate the correct number in the example, as I discovered one night when I had grown dizzy comparing the effects of different rounding techniques in the spreadsheet and database.

If you change all values in column B14 to (A14/6)+.1, you'll get a correct answer not only when the number in A4 is 13, but no matter what you make it. That's a little strange, since the value in B14 isn't always wrong.

What's true, although a bit mind-boggling, is that adding .1 inch to every calculation in column B fixes all rounding errors—without causing any new ones in numbers that worked right the first time.

I don't quite understand why this works, but it does. Change the formula in B4 to read (A4/6)+.1, then copy it through the whole column. If you find any paper lengths that don't return the correct number of lines in the AppleWorks database, drop me a line at *The Main Menu*. And has this anomaly been corrected in AppleWorks 2.0?■

# New Products

## AppleWorks TV

*by Paul Statt*

"If I liked books, I'd buy a book," complains the novice AppleWorks user. "Why do I have to read a tutorial manual and a reference manual to learn to use my computer?"

If you hate reading manuals, too, **AppleWorks Video: The First Step** (PCR Video, 45 Pond Street, Norwell, MA 02061, 617-871-5398, $39.99) may teach you some things about AppleWorks you never knew. The 35-minute, VHS-format training tape covers all aspects of the AppleWorks word processor, database manager, and spreadsheet.

If you have no practical idea of what one of the AppleWorks modules does—say, you've never used a spreadsheet, but are doing pretty well with your word processor and database—The First Step is a good place to start.

AppleWorks rescues the video's heroine from tragic ignorance. The story line is light, but gets the point across: Jennifer Adams is the secretary of the local parent-teacher organization and has two days to mail personal letters, including the group's financial statement and a list of officers, to every member. She doesn't panic—she turns to AppleWorks.

The First Step stresses the integration of AppleWorks' three parts. Combining spreadsheets and letters with files from the database is AppleWorks' ace in the hole, but the program hides it well. Emphasizing the ease of moving information in AppleWorks through the clipboard, the video brings home a point beginners may overlook: AppleWorks is *simple*.

### ►Not for Novices Only

AppleWorks Video: The First Step has four parts: introduction, Practical Applications, summary of open-apple commands, and review.

The tape introduces AppleWorks with fundamentals such as what's in the box, how to make a backup program disk and a data disk, and how to set up a printer—mundane stuff to a long-time user, but sometimes frightening to a beginner. The introduction doesn't cover these procedures in great depth, but the first-time user could, for instance, figure out whether something was wrong with his or her data disk after watching.

The longest act in the show is Practical Applications, the saga of Jennifer Adams. You may find some of the story too simple, but you'll surely learn something you didn't know before about AppleWorks. Do you know what Open apple-U does in the spreadsheet, for instance?

If you didn't know OA-U lets you edit formulas without retyping, you'll surely find out in the third act, an alphabetical listing of all AppleWorks commands. The video captures the commands well; you can actually see something happening on screen when Open apple-D is struck.

The review wraps it up with a quick look at what's available beyond AppleWorks. *The Main Menu* is a better source of this kind of information, but The First Step can teach experienced as well as novice users. If a picture's worth a thousand words, a videotape must be worth $39.99. It was produced for dealers; ask yours if it's available. If not, AppleWorks Video: The First Step may belong in your user-group library.■

# Reviews

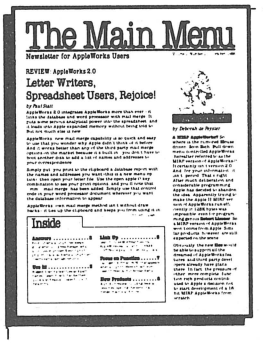
## A Database for Fun and Learning

*by Paul Statt*

AppleWorks, in particular the AppleWorks database, makes a great addition to a school curriculum. After all, students need to keep lots of lists of information: names of the states, U.S. Presidents, the world's natural resources.

But just giving students information has never worked. Kids are naturally curious to discover facts—but nobody's naturally fascinated by memorization.

Tom Snyder Productions' **GeoWorld** makes learning fun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because students must unearth the facts themselves. GeoWorld is a game in which intrepid young geologists travel the world in search of valuable minerals; the winner is the student who finds the most.

### ►A Method of Discovery

If I asked you where in the world you'd look for manganese, where would you start? Kids, I'm sure, have no better idea than you do, but GeoWorld offers a method of discovery. Rather than stumble all over the world, players keep records of what they find where.

That's where the AppleWorks database takes over. GeoWorld creates an array in a ProDOS text (ASCII) file with seven categories: latitude, longitude, amount of ore found, percentage of the world's total this deposit represents, and type of deposit. (It looks like five categories because latitude and longitude represent two each: 43 N, 71 W.)

It's simple to produce an AppleWorks database file from the ASCII file GeoWorld creates; then students really start mining the data. The excellent GeoWorks manual suggests some of the more obvious activities: What parts of the world have the largest deposits of a particular mineral and which have the smallest? Does any single mine produce more than half the world's supply?

Using a daily newspaper's financial pages, students can even calculate the total "mineral wealth" of various countries: It's easy with calculated categories in the AppleWorks database.

### ►Refining the Ore

If databases have an educational purpose, it surely isn't teaching young people to key in information—unless you want to prepare them for lives as data-entry operators.

On the other hand, a ready-made database file lacks the attraction a hand-made one has for students. Each student who plays GeoWorld must come up with his or her own AppleWorks database file. Players need to know not only how to use the data; it's also important to understand where the data came from and how they were gathered.

GeoWorld teaches both the mining and the refining of information. An extensive section in the manual even covers the workings of the AppleWorks database for beginners. This method is ideal because it's concrete: Rather than try to teach database use with "sample files" that have nothing to do with anything else in the curriculum, GeoWorld attacks AppleWorks with practical problems.

The manual suggests that GeoWorld will find its place in earth-science, social-studies, or geography classes, most likely grades 6–12. You might add math and history: It's critical-thinking and problem-solving skills that GeoWorld and AppleWorks really teach. GeoWorld, like all of Tom Snyder's educational simulations, diminishes the distinctions among disciplines. But GeoWorld might also break down some of the boundaries that burden our earth with war and distrust.■

**Product Information**

**GeoWorld**
Tom Snyder Productions
123 Mount Auburn Street
Cambridge, MA 02138
(617) 876-4433
$79.95
Rating: 🍎🍎🍎🍎🍎

The Main Menu reviews range from poor to excellent denoted by one to five red apples. If a product receives one red apple, it means the reviewer wouldn't spend his money to buy it and neither should you. If it receives five red apples, it means that our usually tight-fisted reviewer would part with his money to buy it because of the value it offers in increased productivity and performance.

| | |
|---|---|
| **excellent** | 🍎🍎🍎🍎🍎 |
| **good** | 🍎🍎🍎🍎 |
| **satisfactory** | 🍎🍎🍎 |
| **fair** | 🍎🍎 |
| **poor** | 🍎 |

## Favorites

### ►Mac II Tip

We know this newsletter is about AppleWorks and the Apple II, but we couldn't resist this good inside tip from one of our readers. In the April 1987 issue of *The Main Menu* (p. 2), we told you how to find the IIGS' developers' names hidden in ROM. (Press Control, Option, Open apple-N when you turn on your system.) At the same time, we challenged you to find the surprises in the Mac II.

Here's how to find the digitized photos of the developers of that machine: Hit the programmer's debugger switch, type G (space) 41DB89A, then press Return. A slide show of pictures should then begin. Thanks to David L. Moore of Gainesville, Texas, the puzzle has been solved.■